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ASSIGNMENT BOOKLET

MAT1038 Applied Mathematics 10
Module 1

FOR STUDENT USE ONLY	
Date Assignment Submitted: _____	(If label is missing or incorrect) Student File Number: _____
Time Spent on Assignment: _____	Module Number: _____

FOR OFFICE USE ONLY

Assigned Teacher: _____

Assignment Grading: _____

Graded by: _____

Date Assignment Received:

Student's Questions and Comments

Apply Module Label Here

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Please verify that preprinted label is for correct course and module.

Teacher's Comments

Teacher

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- Are all the assignments completed? If not, explain why.
- Has your work been reread to ensure accuracy in spelling and details?
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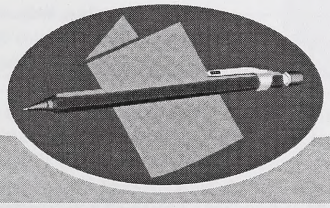
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Applied Mathematics 10

Module 1

Measurement

Assignment Booklet



Learning Technologies Branch

Alberta LEARNING

FOR TEACHER'S USE ONLY

Summary

Total Possible Marks	Your Mark
60	

Teacher's Comments

Applied Mathematics 10
Module 1: Measurement
Assignment Booklet
Learning Technologies Branch
ISBN 0-7741-1608-0

This document is intended for	
Students	✓
Teachers	✓
Administrators	
Home Instructors	
General Public	
Other	



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- Alberta Learning, **http://www.learning.gov.ab.ca**
- Learning Technologies Branch, **http://www.learning.gov.ab.ca/ltb**
- Learning Resources Centre, **http://www.lrc.learning.gov.ab.ca**

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ASSIGNMENT BOOKLET
APPLIED MATHEMATICS 10 – MODULE 1: MEASUREMENT

Your mark on this module will be determined by how well you do on the assignment in this booklet and the module project in the Project Booklet.

The value of each part of the module assignment is stated in the left margin of this booklet. The total value of the module assignment is 60 marks.

(60)

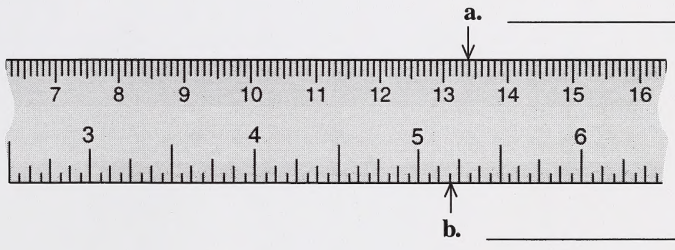
Module Assignment

Read all parts of this booklet carefully and record your answers in the appropriate places. Work slowly and carefully. If you are having difficulties, go back and review the appropriate activity in the Student Module Booklet.

Be sure to complete all parts of the assignment and proofread your responses before you submit this assignment to your teacher for grading.

(4)

1. Following is a picture of part of a ruler. Write the metric and imperial measurements shown on the ruler in the blanks provided.



(4)

2. What is the uncertainty of each measurement in question 1?

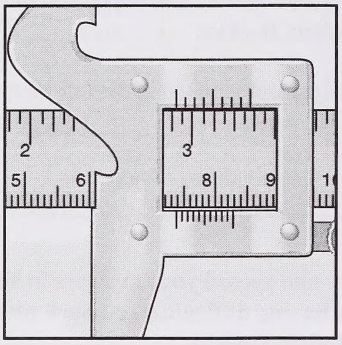
a. _____

b. _____

(8)

3. Following are two pictures of part of a vernier caliper. In the blanks provided, write the imperial and metric measurement shown on each vernier caliper. In the space provided, show the calculations.

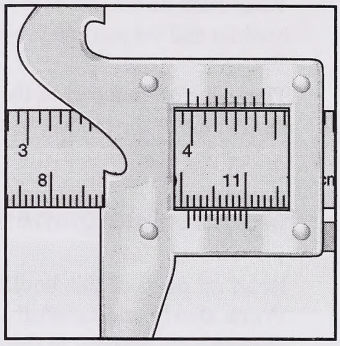
a.



_____ inches

_____ cm

b.



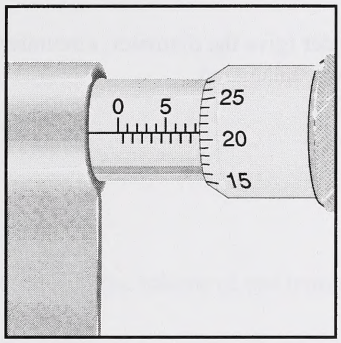
_____ inches

_____ cm

(4)

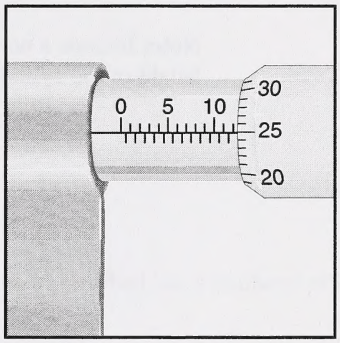
4. Following are two pictures of part of a micrometer. In the blanks provided, write the measurement shown in each reading. In the space provided, show the calculations.

a.



_____ mm

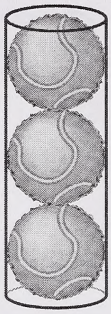
b.



_____ mm

(5)

5. a. Explain how you would make a cylinder in which three tennis balls, each with a diameter of 2.7 inches, would fit snuggly (as shown in the diagram). The cylinder should have a top and a bottom.



Note: Include a net of the cylinder (give the diameter, circumference, and height of the cylinder) with your explanation.

(3) **b.** Calculate the surface area of one tennis ball. **Note:** A tennis ball has a diameter of 2.7 inches.

(3) **c.** Calculate the volume of one tennis ball. **Note:** A tennis ball has a diameter of 2.7 inches.

(3) **6.** The circumference of a basketball is 76.0 cm. What is the diameter of the basketball? Round your answer to one decimal place.

(3) **7.** The volume of a spherical ball is 28 cubic inches. What is the diameter of the ball? Round your answer to one decimal place.

(2) **8. a.** Jason uses the displacement method to determine the volume of a ball bearing. If the ball bearing displaces 82 mL of water, what is the volume of the ball bearing in cubic centimetres?

(2) **b.** What is the uncertainty of the measurement?

9. Sphere A has a diameter of 6 inches. Sphere B has a diameter of 12 inches.

(2) **a.** What is the ratio of the diameter of Sphere A to the diameter of Sphere B? Write the ratio in lowest terms.

(2) **b.** What is the ratio of the surface area of Sphere A to the surface area of Sphere B? Write the ratio in lowest terms.

(2) **c.** What is the ratio of the volume of Sphere A to the volume of Sphere B? Write the ratio in lowest terms.

(3) **d.** Explain why the ratio of the surface areas of the spheres is not the same as the ratio of the volumes of the spheres.

(5) **10.** Store A and Store B sell a similar type of carpet. The carpet in Store A costs $5.95 per square foot. The carpet in store B costs $38.95 per square yard. Which is the better price?

(5)

11. Turn to page 53 of the textbook and read exercise 9 of "Exercises: Checking Your Skills." Choose **one** of the biological systems and explain the health implications of enlarging a child by a factor of 32.

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